

Dual Shield II 81-K2

The wire produces a smooth stable arc and low spatter levels using a 100% CO₂ shielding gas. Dual Shield II 81-K2 was developed for higher tensile steels such as ASTM A302, A533 Class I and A537. Applications include ship fabrication, offshore oil rigs, and heavy equipment construction. This wire is an excellent choice for welding ASTM steels A302, A533 Class I and A537. Dual Shield II 81-K2 produces a smooth stable arc and low spatter levels using 100% CO₂ shielding gas. Applications include ship building, offshore oil rigs, and heavy equipment construction.

Specifications

Classifications	SFA/AWS A5.29 : E81T1-K2C-H8 JIS Z 3313 : T55 6 T1-1 C A-N3 KS D 7104 : YFL-C506R EN ISO 17632-A : T 46 6 1.5Ni P C1 1 H5
Approvals	ABS : 5Y400SA H5 BV : SA5Y50, H5/SA5Y40, H5 CCS : 5Y42SH5 CE : EN 13479 ClassNK : KSWL3G(C)H5, KSW54Y40G(C)H5 (C1) CWB : E551T1-C1A6-K2-H4 DNV-GL : V Y40MS(H5) (C1) KR : L3SG(C) H5 & 5Y40SG(C) H5 LR : 5Y40S H5 (C1) RINA : 5YS H10 (C1) RS : 5Y40S H5, 5Y50S H5 (C1) UKCA : EN 13479
Industry	Civil Construction Ship/Barge Building Mobile Equipment Railcars Industrial and General Fabrication

Approvals are based on factory location. Please contact ESAB for more information.

Welding Current	DC+
Alloy Type	C Mn Ni
Shielding Gas	C1 (EN ISO 14175)

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
C1 Shielding Gas			
As Welded	515 MPa	570 MPa	27 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
C1 Shielding Gas		
As Welded	-51 °C	81 J
As Welded	-18 °C	136 J
As Welded	-29 °C	121 J

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni
0.025	1.18	0.49	0.009	0.013	1.44

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	TTW Dist.	Deposition Rate
1.2 mm	135-265 A	22-34 V	3.81-13.21 m/min		1.1-4.6 kg/h
1.6 mm	165-415 A	22-34 V	2.79-10.67 m/min	16.0 mm	1.9-7.0 kg/h